

ABSTRACT OF THE DISCLOSURE

The present invention relates to a method and apparatus for automatically monitoring an optical signal-to-noise ratio in which an arbitrarily polarized optical signal including an unpolarized ASE noise is inputted to a rotating quarter-wave plate and then to a rotating linear polarizer so that a maximum power and a minimum power of the signal outputted from the rotating linear polarizer can be detected, and the detected maximum power and minimum power is used for automatically monitoring the optical signal-to-noise ratio. The method for monitoring the optical signal-to-noise ratio (OSNR) using a polarization-nulling method, comprises the steps of: (a) linearly polarizing an arbitrarily polarized optical signal including an unpolarized ASE noise; (b) separating the optical signal and the ASE noise from the linearly polarized optical signal including the unpolarized ASE noise to measure a power of the optical signal and a power of the ASE noise included in a bandwidth of an optical signal; and (c) obtaining the optical signal-to-noise ratio (OSNR) using the measured optical signal power and ASE noise power.